
Growing WILD

Winter 1998

Utah's Project WILD Newsletter



Utah's Fabulous Felines!

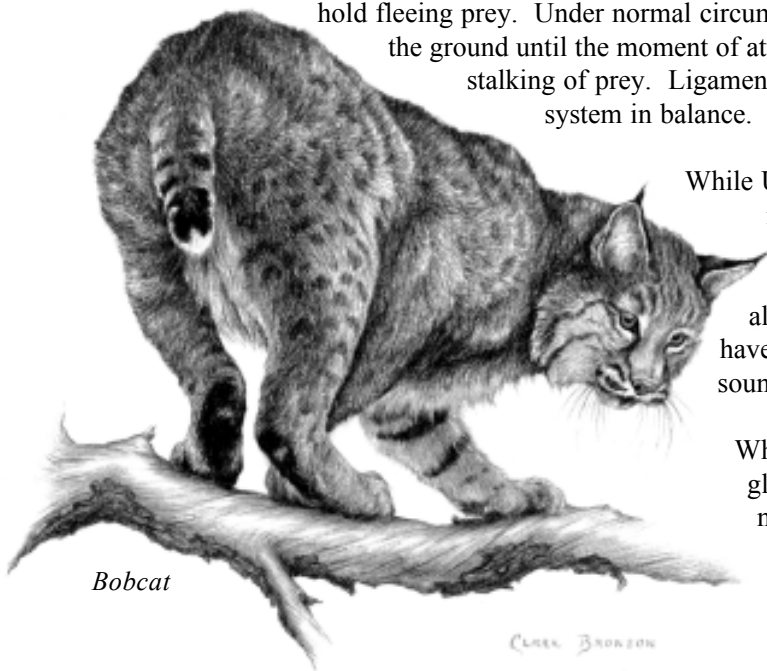
Paleontologists tell us the ancestors of modern cats originated at the end of the Cretaceous Period as dinosaurs were disappearing from the earth. Over the course of the next 10 million years, a large group of carnivorous mammals known as the *Creodonts* evolved from this ancient ancestor. The *Creodonts* were a successful group, living for tens of millions of years, and radiating into several separate and distinct lines before becoming extinct. The earliest known cat, called *Proailurus*, likely came from this line during the Oligocene Epoch between 24 and 37 million years ago. Weighing about 20 pounds, *Proailurus* had strong jaws equipped with razor sharp teeth, and the long, lithe body of a successful predator.

Today, scientists have classified wild and domestic cats into the genetic family, *Felidae*. The *Felidae*, or feline family, is variously subdivided into as few as three or as many as 19 genera, depending on the author. For convenience, three genera can be defined: *Acinonyx* (Cheetahs), *Panthera* (large, roaring cats) and *Felis* (small, purring cats). It is within this last genus that Utah's three species of felines, cougars, lynx and bobcats, as well as all domestic cats, belong.

All felines are highly specialized predators with compact, but strong, limber bodies. All have highly developed whiskers which are modified hairs that have become specialized as sensory organs, and well developed senses of smell, hearing and eyesight. It is this keen eyesight for which they are perhaps best known.

Felines have evolved as nocturnal predators, and have well adapted eyes which provide them with night vision that is approximately six times better than human night vision. The light sensitive retina of a cat's eye is rich in rod cells, which are highly functional in low light, and relatively scarce in cone cells, which function in brighter light. In addition, immediately behind the retina is a thin layer of highly reflective cells called the *tapetum lucidum* which enhances operation of the rod cells. Any light that passes through the retina of the cat's eye without contacting light absorbing cells is reflected back through the retina by the tapetum, giving it a second chance to be absorbed. Excess light that is not absorbed during the second trip through the retina is transmitted out of the eye through the large vertically slit pupil, and appears to observers as the bright yellowish-green eyeshine characteristic of cats.

All felines, except cheetahs, have retractable claws which can be manually extended to allow them to capture and hold fleeing prey. Under normal circumstances, these claws reside in a protective sheath, never contacting the ground until the moment of attack, thereby maintaining a razor sharp point, and allowing for silent stalking of prey. Ligaments, tendons, claws and toes work together to keep this intricate system in balance.



Bobcat

While Utah's felines share these and many other characteristics with their much larger cousins of the genus *Panthera*, there are major differences in their vocal abilities. The *Panthera* have an elastic hyoid structure which supports the tongue and vocal chords and allows for impressive roars. Members of the genus *Felis*, however, have a solid hyoid structure, which allows them to purr, resulting in a sound which has been described by many a child as "kitty's motor".

Whether hunting at night, sleeping lazily in the afternoon sun, or gliding silently through the backcountry, cats are truly one of our natural wonders. We hope you will enjoy this issue of *Growing WILD* as we examine the life, habitats and management of Utah's Fabulous Felines!

Fascinating Feline Facts!

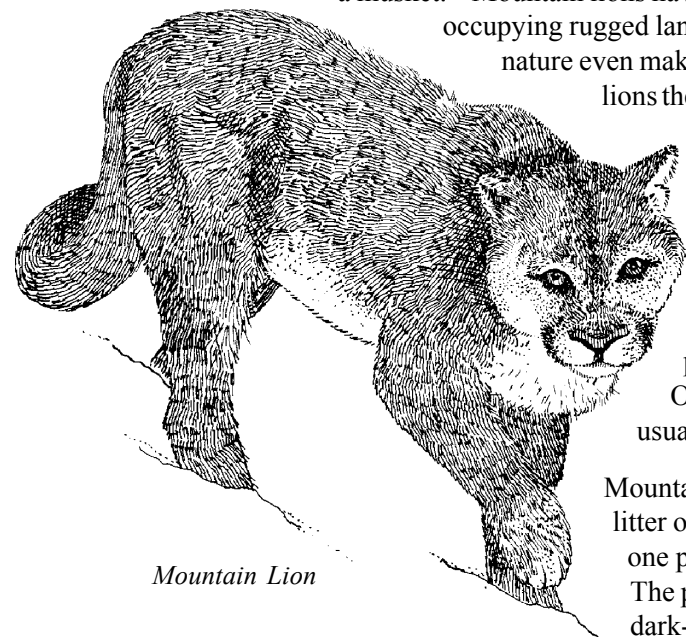
Mountain Lion: *Felis concolor*

Felis concolor, literally, “the cat of one color,” has many common names, including puma, cougar, mountain lion, panther, painter, deer tiger and catamount. Most are a tawny brown in color with a lighter belly, although they range from a light yellow to reddish-brown or grey. All, however, have dark-tipped ears and tails.

Once the most widely distributed land mammal in the western hemisphere, the mountain lion ranged continent wide in the lower 48 until as early as the late 1800s when bounties on its head greatly diminished its numbers. By the 1900s, the mountain lion had been virtually exterminated from the East and Midwest, except for a small endangered population of lions known as the Florida panther. Today, they are found primarily in the wild mountainous ranges west of the Great Plains.

In Utah, mountain lions are found distributed throughout the state. They prefer pinyon-juniper and pine-oakbrush habitats where prey is abundant. Within these habitats, lions prefer rocky cliff ledges and tall trees or brush that can be used for cover.

Although in some areas mountain lions are relatively common, they are very shy and elusive, and thus, rarely seen. In folklore, they have been referred to as the “ghost walker”, and Lewis and Clark wrote, the mountain lion “is very seldom found, and when found, so wary, it is difficult to reach him with a musket.” Mountain lions have, in fact, survived in part by keeping such a low profile and occupying rugged landscapes where humans venture less often. Their secretive nature even makes it difficult for researchers to determine how many mountain lions there actually are.



Mountain Lion

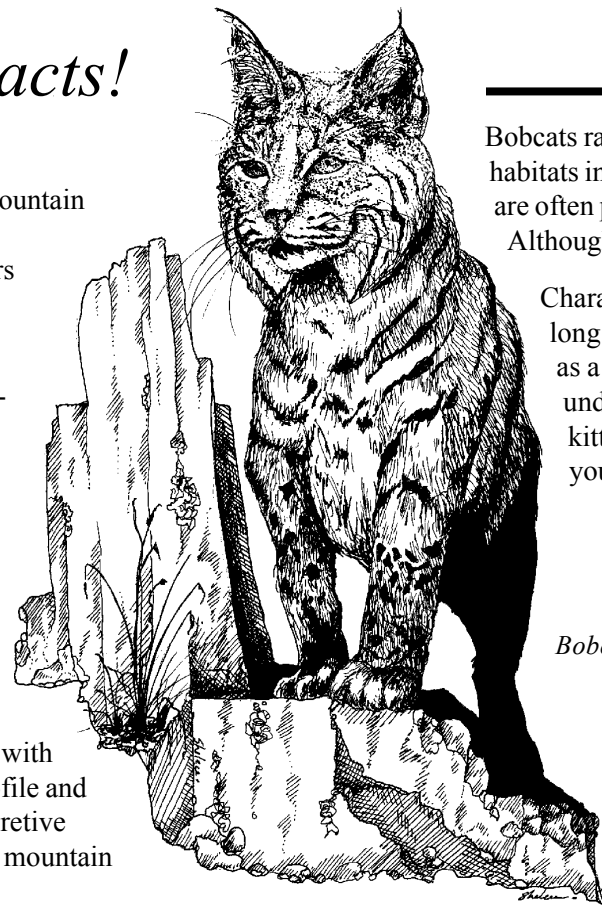
Their mysterious ways, impressive size and amazing power make mountain lions truly awe inspiring predators. Weighing between 80 and 200 pounds, and measuring seven to nine feet in length, including the tail, mountain lions are Utah's largest feline. When hunting for deer, their primary prey, mountain lions rely on stealth, cautiously and silently stalking, and taking advantage of every possible cover, until within a striking distance of about 30 feet. Often the weak, sick and elderly are taken, since healthy prey are usually too alert to let a mountain lion sneak close enough to be caught.

Mountain lions are usually solitary, except for females with kittens. A litter of three kittens is most common. At birth, the kittens weigh about one pound each. Within eight weeks, they are the size of house cats. The playful kittens are covered with blackish-brown spots and have dark-ringed tails. For about two years, they learn survival skills from their mother, and then venture out to establish territories of their own.

Bobcat: *Felis rufus*

The short, “bobbed” two to four inch tail of this cat gives it its common name, bobcat. Its reddish-brown, dark spotted fur gives it its scientific name, *rufus*, which means “red” in Latin. And its legendary fierceness and predatory prowess gives it its nickname, “wildcat.”

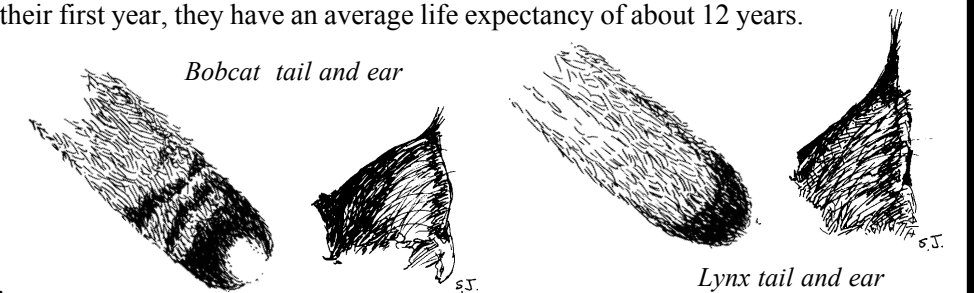
Skillful predators, bobcats are considered to be opportunistic hunters and will feed on almost anything they can catch, including voles, mice, prairie dogs, ground squirrels, small birds, insects and snakes. Although not often, a bobcat can even kill a deer five times its own weight of about 20 pounds. Their preferred prey, however, seems to be cottontail rabbits which, in Utah, make up 80% of their diet. Stealth, not speed, allows the bobcat to sneak up within a “pounce” of its quarry. Any leftovers from a meal are covered with leaf litter and soil to be eaten at a later time.



Bobcat

Bobcats range from southern Canada through the United States, into Mexico. In Utah, they occupy various habitats including broken forested mountains, riparian areas, and rimrock canyon and chaparral country. Dens are often placed beneath hollow logs, within rock piles, in small caves or below overhanging rocky ledges. Although relatively common, their excellent camouflage and secretive nature allows them to often go unnoticed.

Characteristic features of the bobcat include its stubby tail, tipped with black on the top and whitish below, long hind legs, its facial ruff, the fury sideburns on its cheeks, and its black-tipped tufted ears. Classified as a furbearer, its thick, luxuriant coat, made up of long, black-tipped guard hairs and a dense, very soft underfur, has long been sought after by trappers. Other than people, they have few natural predators, but kittens, which are born naked, blind and helpless, can be taken by coyotes, hawks, owls and eagles. If young bobcats survive their first year, they have an average life expectancy of about 12 years.



Bobcat tail and ear

Lynx tail and ear

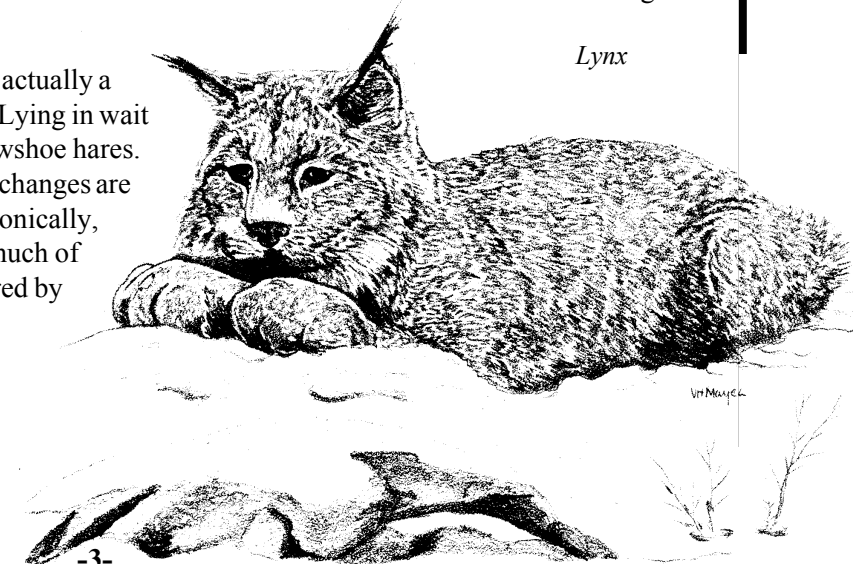
Lynx: *Felis lynx*

The high subalpine forests of Utah's most remote and isolated mountains may still be home to the lynx, our rarest member of the cat family. Lynx are relatively shy, secretive and solitary creatures. Their numbers have probably always been low in Utah, the southern edge of this species' distribution in North America. Once ranging in mountainous regions of Utah as far south as Washington County, lynx are now thought to be restricted to the high Uintas.

Sought after for their thick, beautiful fur, they have been protected in Utah since 1979. Today they are classified by the Utah Division of Wildlife Resources as “Sensitive” and as a “Candidate for Listing” as threatened or endangered by the U.S. Fish and Wildlife Service. The last confirmed specimen of a lynx came from the north slope of the Uinta Mountains in 1973 and a few “probable” sightings were made by credible people in the early 1980s in Summit and Uintah Counties. A trappers survey conducted in 1995 resulted in one reported sighting of a lynx near Hansel Valley but biologists were unable to confirm the sighting. Some biologists even believe that lynx may already have been extirpated from Utah.

Lynx are closely related to bobcats and are very similar in appearance. Lynx, though, are somewhat larger (weighing about 20-25 pounds), have longer legs, and their thick fur is more silvery-grey in color. Lynx also have longer facial ruffs and longer ear tufts. All these features alone make positive identification of an individual difficult. The most distinguishing characteristic however, is the tip of their tail. Lynx have a completely black-tipped tail in contrast to bobcats which have only the top part of their tail tipped in black. Adapted to snow-laden forests, lynx also have exceptionally large paws, about three to four inches in diameter which act like “snowshoes” allowing them to float with ease over deep fluffy snow.

Lynx are generally nocturnal. Their name, “lynx,” is actually a Greek term describing the ability to see in low light. Lying in wait to capture prey, lynx feed almost exclusively on snowshoe hares. Having few natural enemies in Utah, lynx population changes are primarily tied to fluctuations in the hare prey base. Ironically, our zeal to suppress fires in the past has eliminated much of the early successional, post-fire forest habitat preferred by snowshoe hares. Acceptance of the role of fire in natural systems, and preserving remote isolated regions free from human influence may help keep lynx among Utah's wildlife treasures.

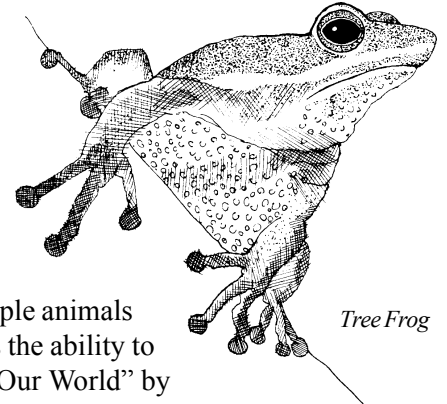


Lynx

Objective: Students will recognize different kinds of vision in animals and understand the link between types of vision and adaptive strategies for survival.

Method: Students use various visual instruments to explore how different animals perceive their world, and discuss adaptive advantages of different vision strategies.

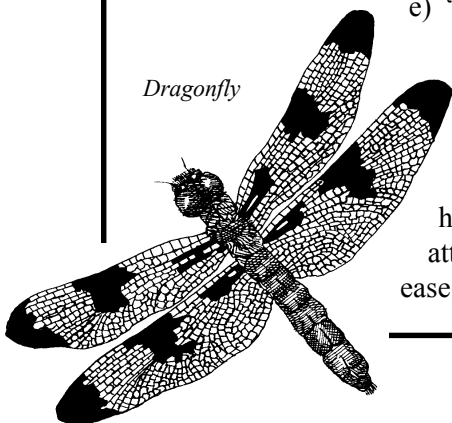
Background: Acute distance and depth perception, wide-angle vision, enhanced peripheral vision, and excellent night vision are examples of vision strategies that allow various animals to better survive. From primitive eyes of simple animals such as planaria and scallops, to the complex eyes of mammals, eyes give animals the ability to see their world in many ways! (Reference: "How Animals See: Other Visions of Our World" by Sandra Sinclair, Facts on File Publications, NY, 1985)



Materials: Kaleidoscopes; a pair of binoculars; fish-eye mirrors; UV lamp and live flowers (buttercups work well); small ball; "movement board" (various colored, 1-inch pipe cleaner pieces glued onto a piece of cardboard to cover surface and several additional 3-inch movable pipe cleaner pieces poked through and bent flat to match the other pieces, and looped on the back for grasping and wiggling); a small flashlight; color and black-and-white photos of the same image; colored pencils; magazines with animal pictures. (A kit with many of these items can be checked out from the Project WILD office by calling (801) 538-4719.)

Procedure: 1) Set up 10 different learning stations to investigate animal vision as follows:

- a) Kaleidoscopes - Insects have compound eyes with numerous facets that each function like separate eyes, allowing them to have excellent peripheral vision to detect predators. Have students draw what they see through the kaleidoscope in a 3-inch circle.
- b) Binoculars - Demonstrate the acute distance and depth perception that predatory birds like eagles, hawks and owls have to detect far off objects and effectively capture prey. Have students look at a far off object with and without binoculars, and then draw what they see in both cases in two separate 3-inch circles.
- c) Fish-eye mirrors - Some fish have curved lenses that give them a very wide field of view. Have students look behind them over their shoulder with a mirror and see an image as a fish would. Then have them look at the same area by turning around. Have them compare what they observed in the two cases.
- d) UV Lamp and flowers - Many pollinating insects, such as bees, can perceive UV light, and some flowers have "Honey Guides" (visible to us only when illuminated by UV light) to direct the insects toward their source of pollen. In a darkened space, shine a UV lamp on the flowers for students to see the "Honey Guides" (sometimes, only the pollen glows). Have them draw what they see.
- e) "Movement Board" - Some predators like frogs can only detect prey when it moves. Have students look at the board with colored pipe cleaners. Then for and instant, wiggle one pipe cleaner piece and see if it can be detected.
- f) Small Ball - Many predators have forward directed eyes with an overlapping field of view (in contrast to prey species whose eyes are directed to the side for peripheral vision) to give them excellent depth perception (binocular vision). This helps them judge distance when capturing prey. Have students cover one eye and attempt to catch the small ball as it is tossed to them. Have them compare this to the ease of catching the ball with both eyes open.

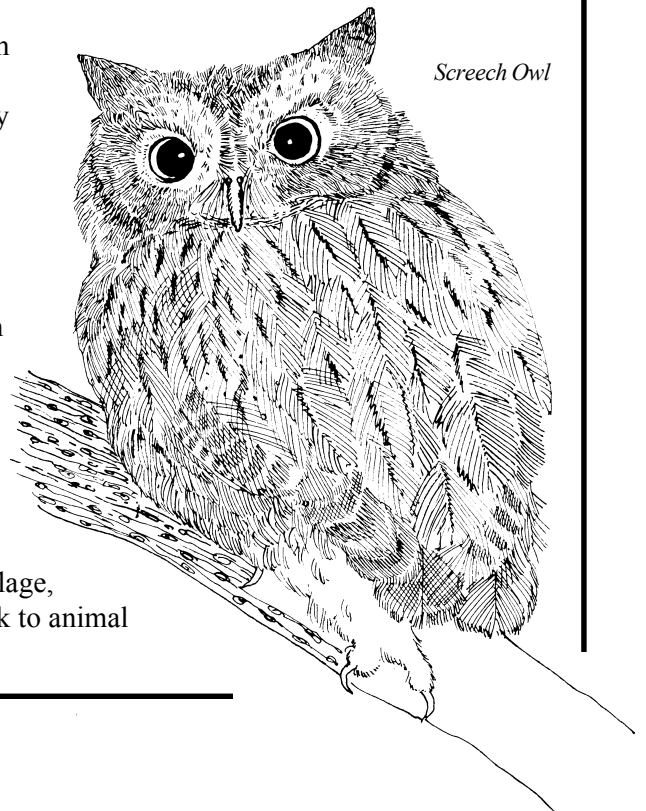


- g) Flashlight- Some simple animals such as planaria and shellfish have eyes merely capable of detecting differences between light and dark. In a darkened area, have students close their eyes while another student turns on the flashlight. Have the student with his/her eyes closed point or move to the source of light.
 - h) Viewpoint - Have students crawl on all fours like an animal and compare this view of their surroundings with an upright view. Have them describe their observations in writing.
 - i) Movable Parts - To widen their field of view, owls (whose eyes are so large, they're fixed in their sockets) can turn their heads a full 270 degrees ($\frac{3}{4}$ of a circle), and chameleons can rotate their eyes all around. Have students stand, facing forward, and list everything they see without moving their eyes or turning their necks. Then have them turn their necks to the right, and then around to the left, and list additional objects viewed. Next, have them actually turn their bodies to the right and then the left to see if additional things can be seen. Last, have them move their eyeballs to the right and the left, and then up and down to see if even more objects can be seen in their field of view.
 - j) Color Vision - Birds and insects have excellent color vision whereas many other animals can see only in black-and-white. Have students view photos of the same image in color and in black-and-white and consider how color vision adds to an animal's ability to survive.
- 2) Share results of the activity as a class. Discuss how different types of vision help different animals to survive.

Evaluation: Have students cut out pictures of animals showing different types of eyes. For each animal pictured have them postulate the type of vision they possess, and how this type of vision helps that animal survive.

Extensions:

- 1) Have students write a paragraph with the title, "I'd like to see like a(n) _____," in which they describe how they see things and why they would like to be able to see in that way.
- 2) Take students on a night hike without flashlights for them to experience how their eyes adjust to seeing with very little light. Discuss vision adaptations of nocturnal animals. Many nocturnal animals have a special structure called the *tapetum lucidum* inside the back of their eyeball which reflects light back again through the retina to enhance light input to the eyes. This causes what is known as "eyeshine," the glowing light that shines from the eyes of nocturnal animals when a light is pointed at them. They also have a greater proportion of rod cells in their retinas, the type of receptor cells that are specialized to gather light, versus cone cells, which function to perceive color. (To see some animals at night, have students cover flashlights with red cellophane; nocturnal animals are not able to see red light.)
- 3) Explore animal coloration (such as warning colors, camouflage, fake eye spots, markings to confuse predators, etc.), and its link to animal vision/perception.



Resources

Pounce on These!

(801) 538-4719

Request a copy:

Colorado Cats: Colorado's Wildlife Company - Beautifully illustrated and well written newsletter of the Colorado Division of Wildlife's Watchable Wildlife program.

Small Cats - Zoobook issue featuring mountain lions, bobcats, lynx and other smaller members of the cat family. \$2.00 (make check out to UDWR).

Mountain Lion - Updated version of Utah's Wildlife Notebook Series featuring description, behavior, ecology and management of mountain lions, plus a special overview of Safety in Mountain Lion Country.

Looking at the American Lion: Behavior, Biology, Biases - An issue focusing on mountain lions from the "Biologue" series produced by the Teton Science School.

Living With Wildlife: In Lion Country - Informative leaflet produced by the New Mexico Department of Game and Fish.

Predators! They're Part of the Picture - Copy of Teacher's Activity Guide from the 1989 National Wildlife Week Packet.

Project WILD Cougar Poster - "Earth is our Only Home, Share it Responsibly" is the quote written on this stunning poster of a magnificent cougar.

Grand Staircase/Escalante National Monument Poster - An exquisite panorama of mountain lion country canyons found in this newest national monument.



Mountain Lion

For Check-out:

Predators! They're Part of the Picture - National Wildlife Federation Slide Tape Program.

Cougar: Ghost of the Rockies - Secrets of the elusive and mysterious cougar are revealed in the excellent video that tracks the two-year study of a female cougar and her three kittens in the wilds of Idaho.

Cougar Crate - Materials kit that includes educational resource materials, a cougar hide, skull, track replicas and more.

Internet Sites:

<http://www.primenet.com/~brendel/index.html>
The Cyberzoomobile Homepage
http://dspace.dial.pipex.com/town/plaza/abf90/main_ie.htm
Big Cats On Line
<http://aztec.asu.edu/phxzoo/bobcat.html>
Phoenix Zoo Homepage

<http://lam.mus.ca.us/cats>
Los Angeles Museum Cats Page
<http://www.doe.ca/envcan>
Canadian Wildlife Service "Who's Who Series" In English and French
<http://members.aol.com/nextmeal/cats.html>
O'Neill Park Homepage
<http://www.mortay.com/cougar/lion.html>
Some neat Cougar info!

School Program: The Predator Education Fund offers school programs on Utah's Predators. For information call (801) 575-7101.

What's New with Project WILD!

It has been said that the only constant in our world is change. Well, during the past few months, several things at Project WILD have changed. We would like to share a few of those changes with you.

NEW OFFICE SPACE

Those of you who have come by the office to pick up materials are already aware that we have moved again. It seems like we just got settled in after our move from the Fairpark to the new Department of Natural Resources building and then, we moved again! Fortunately, this was a much shorter move; just across the hall. We are now located in the southwest corner of the second floor of the new building at 1594 West North Temple in Suite 2410. We hope you will have an opportunity to stop in and visit with us while you are in the neighborhood. If you need to write to us, use the following new address: Project WILD, Utah Division of Wildlife Resources, P.O. Box 146301, Salt Lake City, UT 84114-6301.

NEW OFFICE FACE

As many of you know, Bob Ellis, former Project WILD Coordinator, left Project WILD last June to pursue other environmental education challenges. Replacing Bob as the Project WILD Coordinator is Fred Hayes. Fred came to Project WILD from Jordanelle State Park, where he had been the Environmental Education Specialist at the Rock Cliff Nature Center. Fred brings with him many years worth of experience as a classroom teacher and outdoor educator in Utah's public schools and State Parks. Stop in and introduce yourself to Fred when you get a chance.

NEW PROGRAM

Utah Project WILD has gone Early Childhood! We are excited to offer a new Early Childhood Project WILD workshop with age appropriate adaptations to activities for the young learner.

Our early childhood approach is literature based and utilizes a hands-on, multi-curricular strategy that is suitable for special education, head start, pre-school and day care facilities, regular preK-1 classrooms and more. The format of this new workshop is significantly different from our regular Project WILD workshop, and provides an array of completely new materials and resources. If you are interested in taking an Early Childhood Project WILD workshop in your area, call Audrey Walker at (801) 538-4719.

We'd also like to let you those of you who have already taken this workshop know about our new *Sand Table Tracks* kit now available for check-out. This new resource box has been developed as part of our Early childhood program. *Sand Table Tracks* contains animal track casts, educational materials, literature and activity ideas for use in and around your classroom sand table. Call us at (801) 538-4719 if you'd like to check it out. Also available is an updated copy of our Early Childhood Resource List.

NEW FACILITATORS

We are currently seeking qualified and enthusiastic Project WILD educators from around the state to become Project WILD Facilitators. We are interested in finding people with expertise to become involved with our new Early Childhood Project WILD program, as well as others for our traditional Project WILD workshops. If you would like to become part of our fine Project WILD team of Facilitators, request an application by calling (801) 538-4719.

Wildlife Managment

Wildlife Management and You!

Large predators, such as Utah's cougars, bobcats and lynx, are important to the health of their respective habitats and ecosystems. In the absence of predators, prey species in a given area tend to undergo extreme fluctuations in population numbers, with "boom" and "bust" cycles occurring regularly. The presence of predators tends to moderate these cycles. Balancing population numbers of both predator and prey is a never-ending challenge for wildlife managers.

In Utah, cougars are considered to be a game animal, and the Utah Division of Wildlife Resources promotes cougar hunting as a wildlife management tool. Prior to 1967, cougars were not protected in Utah, and hunting occurred throughout the state without restriction. Recognizing the need to better manage Utah's cougar populations by controlling the number of cougars harvested, the cougar was afforded protected status in 1967. Since that time, various strategies have been employed to maintain cougar populations within the management objective levels for their habitat. In 1989, a statewide limited entry permit system for the hunting of cougars was implemented. This system allocated a limited number of hunting licenses for identified cougar management units based on the available surplus cougar population to be harvested. Permit holders were then free to pursue cougars in their permit area through the duration of the hunting season.

In response to declining deer herds resulting from a series of hard winters, a Harvest Objective Permit System was instituted on certain cougar management units in 1996 to assist in deer recovery. Under the Harvest Objective Permit System, specific cougar harvest numbers within the cougar management units are identified, and hunting is allowed until that number is reached. When the designated number of animals has been removed from the unit, hunting is closed on that unit. Harvest objectives are reviewed and revised annually to maintain the health of cougar and prey populations.

While the lynx is completely protected by state and federal law in Utah, bobcats are considered furbearers and are hunted and trapped throughout their local range. Hunters and trappers desiring to pursue bobcats may obtain up to seven bobcat possession tags annually. Any bobcats harvested must be inspected and tagged by a Division of Wildlife Resources officer, and the lower jaw surrendered. By cutting cross-sections through the canine teeth in the jaw, biologists are able to determine the age of the animal by counting the rings of cementum, much as you would determine the age of a tree by counting the rings. Close monitoring of the bobcat harvest by biologists has helped ensure the long-term success of Utah's bobcat populations.



Mountain Lion

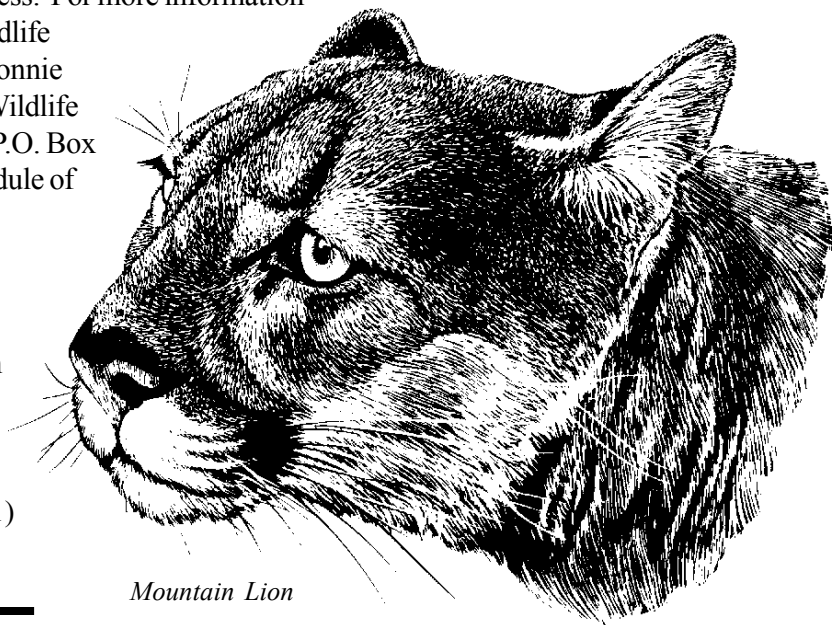
Cougars, bobcats and lynx are only a small sampling of wildlife species that are managed by the Division of Wildlife Resources for the people of Utah. In actuality, more than 600 different mammals, birds, fish, reptiles, amphibians and crustaceans are monitored and managed by trained biologists working within the agency. With so many different species, and with the many divergent attitudes and opinions held by the state's citizenry, it is obvious that the management of wildlife species, to accrue the greatest benefit to the environment and to the citizens of the state, is an overwhelming task. Decisions, however, must be made on critical issues affecting our wildlife heritage. Under Utah law, decisions regarding wildlife management policies are made by a governing body known as the Utah Wildlife Board. The Wildlife Board consists of individuals appointed by the governor, each representing different interests related to the management of wildlife. In accomplishing its mission, the Wildlife Board is assisted by Regional Advisory Councils from each of the five regions of the state.

Each Regional Advisory Council (RAC) consists of 12 to 15 members representing local interest groups and stakeholders as follows: two members from the agricultural community, two representatives from various sportsmen's associations, two representatives of non-consumptive wildlife user groups, one locally elected public official, one member from the U.S. Forest Service, one employee of the U.S. Bureau of Land Management, one member representing Native American interests (in the Northeastern and Southeastern regions) and two members of the public at large as recommended by each region's regional supervisor. RAC members typically serve four-year terms and are nominated by the executive director of the Department of Natural Resources and the director of the Division of Wildlife Resources for approval by the governor.

The Regional Advisory Councils meet regularly to gather input from citizens concerning current topics of interest on the management of wildlife in Utah. Anyone wishing to express their concerns or opinions about wildlife issues and management policies may do so at their local RAC meetings. Dates, times, locations and agendas for these meetings are advertised in newspapers throughout the state, and are available at regional Division of Wildlife Resources offices. Following a period of public comment and a review of recommendations by Division of Wildlife Resources biologists on selected topics, the RAC members vote on the issues and pass their suggestions on to the Wildlife Board. Upon passage by the Wildlife Board, a proposed action becomes policy. Proposed actions may be initiated by RAC members, Division of Wildlife Resources personnel or concerned citizens.

The management of our wildlife heritage is a fascinating process. Utah Project WILD encourages all of Utah's concerned citizens to become involved in this process. For more information on Regional Advisory Councils and their role in wildlife management in Utah, please feel free to contact Connie Dalley, RAC Coordinator, at the Utah Division of Wildlife Resources, 1594 West North Temple, Suite 2110, P.O. Box 146301, Salt Lake City, Utah 84114-6301. A schedule of upcoming RAC meetings can also be found on the Division of Wildlife Resources' web site at <http://www.wildlife.utah.gov>.

Individuals interested in obtaining more information on the management of Utah's predators can contact Boyde Blackwell, Mammals Program Coordinator, at the Utah Division of Wildlife Resources, or the Predator Education Fund at (801) 575-7101.



Mountain Lion

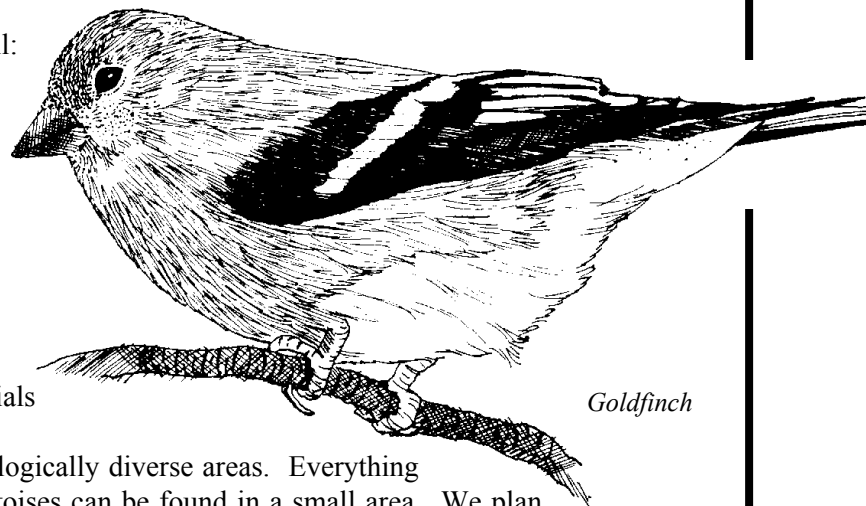
Advanced Wildlife Workshop

Migratory Birds of Utah

Tired of the cold? Ready for some excitement? Do you want to meet some famous world travelers? Join Project WILD at Lytle Preserve on **April 17-19**, to study **Neotropical Migratory Birds**. Frank Howe, Utah Division of Wildlife Resources' Avian Program Coordinator; Merrill Webb, birding expert and Provo High biology teacher; and Rick Fridell, conservation biologist, will guide us in learning about some of Utah's most fascinating creatures in one of the nation's premiere birding hot spots.

During this fun-filled time, participants will:

- discover how to collect and interpret data about migratory birds
- learn to identify some of Utah's Neotropical migrants
- explore Utah's Mojave Desert ecosystem
- receive a variety of useful teaching materials



Goldfinch

Lytle Preserve is in one of Utah's most biologically diverse areas. Everything from the common black hawk to desert tortoises can be found in a small area. We plan to camp at Lytle Preserve and there will be moderately difficult hiking. A potluck dinner is scheduled for Friday evening and all other meals except lunch on Saturday will be provided.

- Workshop fee is \$30.
- Prerequisite: Completion of a Basic Project WILD Workshop.
- USU Graduate level Credit available (2 hours for \$20. Register at workshop)
- Project WILD will run a shuttle from the Wasatch Front.
Participant list will be provided for others to arrange carpooling.
- Times: Afternoon of the 17th through morning of the 19th.
- Questions: call (801) 538-4719 or (801) 538-4720
- Send registration to: **Project WILD, UDWR, PO Box 146301, Salt Lake City, UT 84114-6301**

Deadline to Register: March 15, 1998

Return form with \$30 check payable to UDWR.

Name _____ Phone (h) _____ (w) _____

Address _____

Occupation _____

Project WILD Workshop taken when? _____ and where? _____

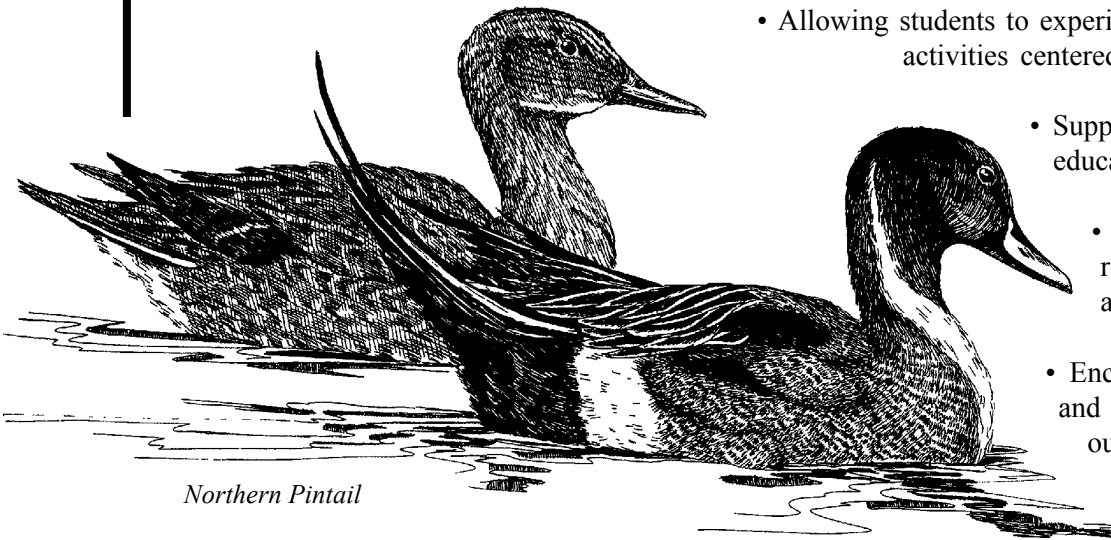
_____ I need transportation from Salt Lake City.

Contest

The 1998 Federal Junior Duck Stamp Contest

Once again, students from Utah's schools will have the opportunity to compete with students from across the country in one of America's premier wildlife conservation competitions. Combining a scientific study of North America's waterfowl with the visual arts gives teachers a tremendous opportunity to apply principles of interdisciplinary education in their classrooms. The benefits of the Junior Duck Stamp program include:

- Allowing students to experience creative learning activities centered around conservation;
- Support of conservation education through the arts;
- Scholarships and recognition for student achievers; and
- Encouragement for urban and minority students in outdoor education.



Northern Pintail

In Utah, the Junior Duck Stamp contest is sponsored jointly by the Ogden Nature Center and Project WILD, and is open to any student in grades K-12. Entries submitted to Project WILD by the March 15, 1998 deadline will be judged against others in the artist's age group (K-3, 4-6, 7-9 and 10-12) with first, second, third place and honorable mention ribbons being awarded in each category. A Best of Show winner will also be selected to compete nationally against Best of Show winners from other states for scholarships and prizes.

Junior Duck Stamps are considered collectables, and are sold through post offices nationwide. Proceeds from the sales of Junior Duck Stamps are used to fund scholarships and prizes for the participants.

For additional information or for entry forms, contact Project WILD at (801) 538-4720 or the Ogden Nature Center at (801) 621-7595.

Curriculum Guide Available

To assist educators in integrating the Junior Duck Stamp Contest into their current curriculum, the United States Department of the Interior, Fish and Wildlife Service has made available a 13 minute video "Conservation Through The Arts" and a Teacher's Curriculum Guide. The Guide presents conservation education through lessons in the visual, performing, and language arts. Goals, objectives, activities and evaluation techniques are included in the guide, as is a discussion of stamp designing and collecting. For a **free** copy of the guide and/or videotape, contact the U.S. Fish and Wildlife Service, Federal Duck Stamp Office, 1849 C Street, NW Suite 2058, Washington D.C., 20240.

Project WILD

Utah Division of Wildlife Resources
1594 West North Temple, Suite 2110
Salt Lake City, Utah 84116



Growing WILD is written by Fred Hayes, Diana Vos and Audrey Walker. Edited by Vicki Unander. Illustrators: Shelece Jorgensen, Brent R. Todd, Larry Tosechik, Clark Bronson and Vicki Mayea, plus additional clip-art selections.



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